



Jemena Gas Networks (NSW) Ltd

IT Investment Brief – Enterprise Content Management Uplift

Non-Recurrent – Compliance



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Glossary

AER	Australian Energy Regulator
Capex	Capital Expenditure
CO2	Carbon Dioxide
Current regulatory period	The period covering 1 Jul 2020 to 30 Jun 2025
ECMS	Enterprise Content Management Systems
FIRB	Need definition
ICT	Information and Communications Technology
Jemena	Refers to the parent company of Jemena Gas Network
JGN	Jemena Gas Network
kWh	Kilowatt hour
Next regulatory period	The period covering 1 Jul 2025 to 30 Jun 2030
NPV	Net Present Value
Opex	Operating Expenditure
RYxx	Regulatory year covering the 12 months to 30 June of year 20xx for years in the Next Regulatory Period. For example, RY25 covers 1 July 2024 to 30 June 2025
SaaS	Software as a Service
SOCI	Security of Critical Infrastructure Act
The Group	Jemena Gas Network and Jemena Electrical Network
Totex	Total Expenditure
U.S.	United States of America

Enterprise Content Management Uplift

Objective	This initiative aims to modernise and consolidate content management platforms for Jemena Gas Networks (JGN) staff to maintain compliance with regulatory obligations while delivering efficiency and safety outcomes for customers and other stakeholders through better access, security, organisation and management of operational and investment content.		
Non-recurrent ICT sub-categorisation	<input type="checkbox"/> Maintaining existing services, functionalities, capability, and/or market benefits	<input checked="" type="checkbox"/> Complying with new/alterd regulatory obligations/requirements	<input type="checkbox"/> New or expanded ICT capability, functions, and services
Background	<p>JGN’s Enterprise Content Management Systems (ECMS) stores and manages structured and unstructured content, including but not limited to records, processes, procedures, policies, drawings, contracts, reports, forms, standards, specifications and more.</p> <p>Changes in the ECMS have triggered the need for further uplift</p> <p>Since the first elements of these systems were implemented in the late 1990s, JGN’s ECMS has expanded over time driven in part by:</p> <ul style="list-style-type: none"> • regulatory reform resulting in changes to the responsibilities and obligations of JGN and its businesses, including in energy law (such as ring-fencing requirements), privacy law and cybersecurity law; • changing needs of stakeholders, including information provision to regulators and governments; • changing technology and digitalisation resulting in the adoption of new technologies, systems, and platforms, including to promote efficiency and cybersecurity; • managing an expanded asset base in JGN; and • JGN’s efficient investment in business improvements to adapt to our changing business environment. <p>Historically, JGN’s efficient development and maintenance of its ECMS has supported the provision of gas services to JGN customers. However, these incremental changes to the ECMS have resulted in limitations across the disparate platforms¹ forming part of the ECMS.</p> <p>The current system has capability limitations</p> <p>It has become increasingly inefficient and time-consuming to search for content due to a surge in digitalisation over recent years by replacing content historically managed in physical form with digital content. This is causing difficulties for JGN staff in efficiently sourcing information required by business users for operational activities, customer service, regulatory information requests and audit purposes.</p> <p>While the ECMS content server has historically served the needs of JGN staff, the current implementation does not offer robust and secure document sharing and collaboration capabilities like modern cloud-based offerings available in the market. Controlled documents on the ECMS cannot be directly accessed using mobile devices including those issued to JGN staff. To access content, staff create disparate and unmanageable work-around solutions to access required content.</p> <p>It is becoming increasingly difficult to maintain operational efficiency and manage content control. JGN staff must now set up manual workarounds for various operational activities such as printing paper forms and diagrams and undertaking manual validation and approval processes for controlled documentation.</p> <p>The ECMS is becoming difficult to support and optimise and lacks the advanced optimisation features of the latest software-as-a-service (SaaS) offerings. This means it is costly and time-consuming to undertake version upgrades to leverage new features and maintain system security. Moreover, the vendor has already flagged that it will cease making capability and functionality enhancements to the current on-premises system and is dedicating 80% of future investment to the cloud equivalent.</p>		

¹ These platforms include OpenText Content Server, Microsoft File Server, Microsoft SharePoint and Teams, DrawBridge for managing engineering drawings and images, and Aconex for project management-specific features.

	<p>Managing our regulatory obligations will become increasingly more challenging</p> <p>ECMS limitations will make it increasingly difficult for JGN to extend capability required to continue to meet our regulatory obligations:</p> <ul style="list-style-type: none"> ● Gas Distribution Ringfencing Regulatory Obligation: Reduced ability to identify JGN specific content and implement necessary controls to ensure content is not shared or made accessible to individuals or business that would contradict ringfencing obligations. ● FIRB Regulatory Obligations: Reduced ability to audit access and sharing of documentation in compliance with FIRB obligations, such as access of sensitive asset information outside of Australia. ● Privacy Regulatory Obligations: Reduced ability to identify and protect personal information collected in records and documents and implement group wide policy controls to secure and govern such content from misuse, unauthorised access or disclosure until it is securely disposed. ●  ● Commercially Confidential Obligations: Reduced ability to manage versioning of confidentially contracts to avoid breach of obligations. ● Regulatory Reporting Obligations: Obligations for timely and accurate provision of information to regulators including the AER in response to regulatory information notices and other regulatory requests: Reduced ability to quickly and confidently locate accurate information across multiple platforms, in multiple repositories.
<p>Customer Importance</p>	<p>When we interact with our customers, we create documentation and content that needs to be stored and managed throughout its lifecycle. In order to continue to serve our customers and adhere to growing legal and regulatory compliance obligations, we require modern tooling that allows us to enforce our information, records and document management policies, processes and procedures.</p> <p>If we can better organise, access and manage our content, our customers will benefit from improved services, more secure management of customer information and more efficient operations.</p>
<p>Key Considerations</p>	<p>In considering whether and how to address various challenges across the disparate platforms forming part of the ECMS, we have considered various strategic factors.</p> <p>To address the challenges outlined in the Background section of this document, our approach involves investing in the establishment of a centralised content management system, streamlining content access, search processes and version control, and mitigating the risk of non-compliance to regulations and audit requirements.</p> <p>Informed by input from technology vendors and external research agencies such as Gartner, JGN's preferred option will allow us to address this gap in the 2025-30 period through the functionality and capability delivered by the systems outlined in this initiative brief. The approach described in this brief aims to achieve the following key outcomes:</p> <ul style="list-style-type: none"> ○ Centralised and efficient content search mechanism: Consolidate, integrate and modernise our existing content management platforms so that we will have a centralised and integrated ECMS that allows efficient content indexing, tagging and version control. ○ Efficient content collaboration: Implement robust and secure content collaboration tools to allow users to access controlled content based on their role, allow teams to collaborate, access and update documents simultaneously and provide mobile device compatibility. ○ Optimise process and integration capabilities: Address content duplication, better manage manual effort in operational activities and be able to respond quickly to regulatory requirements, growing market trends and customer demands. ○ Management of content throughout its lifecycle: Enable JGN to effectively manage group content throughout its lifecycle, from creation to classification, indexing, storage, retrieval, distribution, access, version control, collaboration, review and approval, retention, archiving, disposal, audit and compliance.
<p>Options</p>	<p>JGN has considered two alternatives to deliver the capability articulated above:</p> <p>(1) Do nothing</p>

(2) Consolidate and modernise the disparate content management platforms.

Option 1: Do nothing

Description

This option requires that no action is taken and results in no changes to current platforms; minimum viable application version upgrades will be performed to ensure vendor support is maintained and security patches can be applied.

Benefits

By doing nothing, JGN would avoid incurring the costs and many of the risks outlined at Option 2 below in relation to the proposed initiative. However, doing nothing may result in JGN no longer having a workable ECMS, would return no benefits and increase the overall risk significantly.

Risks

Without investment to modernise JGN's content management platforms, our ability to manage and govern JGN content will deteriorate over time. As this capability deteriorates, the likelihood of breaching regulatory obligations (refer Background above) will increase.

As observed in the Optus security breach of 2022, a significant risk could eventuate regarding disposal of content that is no longer required by JGN and the consequences and costs of not disposing content effectively can be significant. JGN requires modern content management platforms that support intelligent content archiving and disposal policies to ensure data is responsibly archived or disposed of when no longer required by JGN.

Community expectations and government policy responses on privacy has also shifted in recent years, leading to greater financial, legal and reputational impact for any privacy breaches by an organisation.

Summary

This option is not recommended as we do not consider it reflects good industry practice given the risks outlined above. There would generally be no benefits for JGN for incurring these risks other than avoiding the costs outlined below in Options 2.

Option 2: Consolidate and modernise our disparate content management platforms.

Description

This option will modernise the current architecture, integration and remove the complexity and duplication of features and functions across our multiple Content Management platforms. It will consider which platforms need be retained and integrated. It will also consider if the remaining platforms are better placed to meet business and customer requirements running on Group managed infrastructure or as a SaaS platform.

Benefits

Emission Benefits

- Improved ability to integrate and share with line of business applications and accessing controlled content will reduce the need to print paper forms/diagrams by the field workers and in turn reduce usage of paper, ink and other resources.
- Reduction in creating multiple copies of documents will lead to reduced storage costs and power usage in datacentres thereby reducing carbon footprints.
- JGN anticipate a reduction in storage between 20-30%. A Carnegie Mellon University study² concluded that the energy cost of data transfer and storage is about 7 kWh per gigabyte. Saving and storing 100 gigabytes of data in the cloud per year would result in a carbon footprint of about 0.2 tons of CO2, based on the usual U.S. electric mix.

² Store Smart – Information Technology Services – Carleton College

Customer Benefits

- A modern content management platform will support intelligent content archiving and disposal policies to ensure data is responsibly archived or disposed of when no longer required by JGN, minimising data breach risks that could impact customers.
- Real time updates and document collaboration between field and office workforce enable office workers to provide accurate information for customer enquiries.
- Improved operational efficiencies helps our workforce to serve the customers in a more time efficient and timely manner.

Compliance Benefits

- Streamlined efforts through version control, access control, user authentication and encryption will help us comply with regulatory obligations as outlined above in Background.
- Efficient records retention and disposal of records will avoid the risk of compliance related to document retention and other records management obligations.
- Support our long-term compliance within a heavily regulated industry by strengthening information governance and effectively oversee the governance measures.

Risks

The risks are relatively minor and will be managed through project implementation controls.

Costs

The forecasted investment costs have been determined based on the following activities:

- Conducting requirement gathering workshops with various key stakeholders across the business.
- Conducting initial review of the existing content management systems and their associated operational expenses.
- Performing an initial market analysis encompassing several industry-leading companies as listed in the Gartner Market Guide for Content Services platform.
- Indicative cost estimates from Technology vendors.

\$2023	RY26	RY27	RY28	RY29	RY30
Total Capex					
Non-recurrent Opex		██████	██████	██████	██████
Recurrent step Opex			██████	██████	██████
Total Opex		██████	██████	██████	██████
Totex		██████	██████	██████	██████

This is an Enterprise-wide initiative; Costs have been allocated in accordance with Jemena Group Cost Allocation Methodology.

This option will incur non-recurrent costs for JGN of ██████ and recurrent step opex for JGN of ██████ for the 2025-30 period to deliver Enterprise Content Management capabilities.

Summary

This option will improve our ability to manage content in an accurate and controlled manner by having a centralised and integrated content management system, improve collaboration, improved adaptability to emerging technologies and conform with the regulatory and compliance obligations.

JGN also considers that it best reflects good industry practice and provides the lowest sustainable cost.

Options Summary	The table below summarises the quantitative and qualitative differences between the analysed options.					
		Capex (\$2023)	Project Opex (\$2023)	Project Totex (\$2023)	NPV	Residual Risk
	Option 1	Not applicable	Not applicable	Not applicable	Not applicable	Moderate
	Option 2	■	■	■	■	■
What We Are Recommending	<p>JGN proposes to proceed with Option 2. This option best reflects accepted good industry practice and will ensure we are able to mee our ongoing regulatory obligations.</p> <p>Option 1 will limit our ability to manage and govern JGN content over time and as this capability deteriorates, the likelihood of breaching regulatory obligations will increase. We consider that option 1 does not reflect accepted good industry practice.</p>					
Dependencies on other Investment Briefs	Not applicable.					
Relationship to ICT Capital Forecast	The supporting modelling for this investment brief is contained in following investment framework model: JGN - IT Investment Brief - Enterprise Content Mgmt System - Costs and Benefits Analysis Model.xls					